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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,954	11/18/2003	Mitsuo Narita	080542-0162	4526

22428 7590 12/15/2004

FOLEY AND LARDNER
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3000 K STREET NW
WASHINGTON, DC 20007

EXAMINER

HAILEY, PATRICIA L

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/714,954

Applicant(s)

NARITA ET AL.

Examiner

Patricia L. Hailey

Art Unit

1755

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 is/are allowed.
- 6) ☒ Claim(s) 7-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/23/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Applicants' Priority Document was filed on November 18, 2003.

Claim Objections

2. ***Claims 11 and 12 are objected to because of the following informalities:***

Claims 11 and 12 are objected to for reciting the phrase "is used". It is respectfully suggested that these claims be amended, for example, to state: "in the presence of a reaction catalyst, wherein said reaction catalyst is the zinc chloride-loaded support according to claim 7."

Appropriate correction is required.

Applicants are respectfully reminded that the above quote is only an example of how claims 11 and 12 should read, and that any amendments to these claims (as well as all pending claims) be fully supported by Applicants' Specification.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. *Claims 11 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.*

Claims 11 and 12 are indefinite because they fail to provide process parameters, e.g., temperature and/or pressure, under which “reacting” takes place. The term “reacting” in itself is vague and indefinite; such a term alludes from any of a variety of process steps, from placing the components in containers side by side to admixing the components in one container or reactor.

Claim Rejections - 35 USC § 102/ 35 USC § 103

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. *Claims 7-12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Harley et al. (U. S. Patent No. 5,041,406).*

Harley et al. teach a catalyst comprising a salt of a Group IA metal, a Group IIA or IIB metal, preferably Group IIB metal, and a neutralizing number of counter anions supported on a non-alumina carrier material. Examples of the Group IIB

metal include zinc, and examples of the counter anions include chloride, which is preferred. See col. 2, lines 22-36 of Harley et al.

Examples of the non-alumina support include activated carbon and silica gel. See col. 2, lines 45-57 of Harley et al.

The salt (e.g., zinc chloride) is supported on the carrier material by any standard impregnation technique. See col. 2, line 58 to col. 3, line 14 of Harley et al., which also discloses exemplary weight percentages for the salts.

The aforementioned catalyst can be used in processes for contacting a hydrocarbon and hydrogen chloride to produce the corresponding chlorinated hydrocarbon. Examples of the hydrocarbon include compounds corresponding the formula ROH, such as methanol, ethanol, and propanol. See col. 3, lines 15-65 of Harley et al.; this disclosure also discusses exemplary process conditions including temperature, gas hourly space velocities, and pressures.

In view of these teachings, Harley et al. anticipate claims 7-12.

In the alternative, it is noted that claims 7 and 8 are product-by-process claims, and that claims 9-12, directed to a catalyst (claims 9 and 10) and to a method of using said catalyst (claims 11 and 12) depend, respectively, from claims 7 and 8. The teachings of Harley et al. set forth above read upon the limitations of claims 9-12 in their present form.

With respect to product-by-process claims, it has been held that even though product-by-process claims are limited by and defined by the process, determination

of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In *re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Further, “The lack of physical description in a product-by-process claim makes determination of the patentability of the claim more difficult, since in spite of the fact that the claim may recite only process limitations, it is the patentability of the product claimed and not of the recited process steps which must be established. We are therefore of the opinion that when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claimed in a product-by-process claim, a rejection based alternatively on either section 102 or section 103 of the statute is eminently fair and acceptable. As a practical matter, the Patent Office is not equipped to manufacture products by the myriad of processes put before it and then obtain prior art products and make physical comparisons therewith.” In *re Brown*, 459 F.2d 531, 535, 173 USPQ 685, 688 (CCPA 1972).

Allowable Subject Matter

10. Claims 1-6 are allowed.
11. The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not teach or suggest the claimed process for producing a zinc chloride-loaded support said zinc chloride being loaded on a solid support, wherein a mixture of the solid support and zinc oxide is brought into contact with (1) water vapor containing a hydrogen chloride gas or (2) with a hydrogen chloride gas so that said zinc oxide is chemically converted into zinc chloride.

Harley et al. as discussed above teaches a catalyst comprising zinc chloride on a non-alumina support, such as silica gel, but does not teach or suggest Applicants' claimed method. In Example I of Harley et al., silica is impregnated with a solution of zinc chloride and potassium chloride. See also col. 2, lines 55-66 of Harley et al.

Petrosky et al. (U. S. Patent No. 4,922,043) teach a process for the preparation of methyl chloride by heating methanol and hydrogen chloride as a vapor mixture in contact with a catalyst comprising an aqueous solution of, most preferably, zinc chloride. See col. 3, lines 4-25 of Petrosky et al.

European Patent No. 1,421,992 has a publication date of May 26, 2004, which is after Applicants' effective filing date.

Conclusion

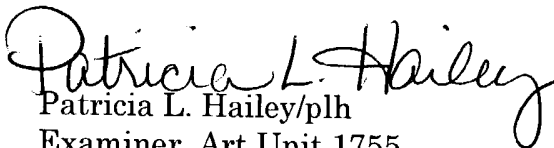
12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Hailey whose telephone number is (571) 272-1369. The examiner can normally be reached on Mondays-Thursdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L. Bell can be reached on (571) 272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group 1700 Receptionist, whose telephone number is (571) 272-1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Patricia L. Hailey/plh
Examiner, Art Unit 1755
December 13, 2004


Mark L. Bell
Supervisory Patent Examiner
Technology Center 1700